Growing opportunities in government services

Satellite is a key enabler for government and military groups the world over, delivering unparalleled capabilities both at home and abroad. From keeping military commanders up to date in the field, enabling heads of government to securely conduct international affairs, and to allowing officials to respond to local emergencies, satellite provides vital voice, imaging, video, data and connectivity services the world over. While in previous years, many governments had stalled or cut their space programme budgets, a turn-around in investment is expected soon, prompting satellite service providers to ramp up their offerings.

Government services have always been a key application for the satellite sector. The delivery of secure, reliable, always-on, global communications is vital for government and military applications alike. In the battlefield, real-time updates enabled by satellite can make the difference between life and death, while within government departments, the transfer of classified documents and communications is key to operational functionality.

Defining future demands

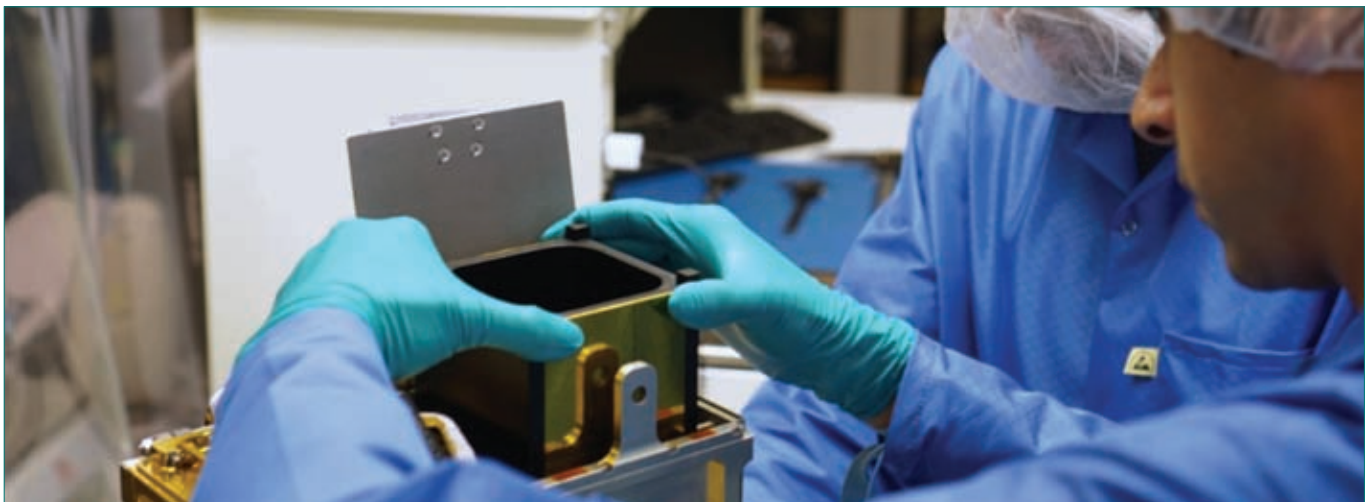
As is the case in many sectors, government needs are changing as technology advances and new applications develop. In the November 2016 White Paper, *'SES Charts Rising Government Needs'* SES forecast that the global market for government and military fixed satellite service (FSS) capacity would reach 615 transponder equivalents (TPEs) by 2024, up from 470 TPEs in 2014, with even higher growth expected for high throughout satellite (HTS) capacity, at 82.3Gbps in 2024, up from 1.97Gbps in 2014. SES identified the following key market trends as major drivers in government satellite services demand:

Intelligence, surveillance and reconnaissance (ISR) technology using remotely piloted aircraft systems (RPAS)
The exponential growth in RPAS-based ISR for civil and military uses is a good indicator of the direction of the international government market. In 2010, 69 percent of the global demand for RPAS came from the US Government, while in 2015 the US accounted for 49 percent of global demand. During this five-year period, the US Government increased its use of ISR systems while decreasing its physical presence, but international demand increased even more during the same years. By deploying RPAS-based ISR, governments can maintain an ISR capability without having to keep a team on the ground, decreasing risk to personnel and saving costs. The connectivity requirements of RPAs are demanding; for example, Predator RPAS require 3-5Mbps, Reapers require 5-10Mbps, and Global Hawks require 10-50Mbps. As demand for these systems increases, so will demand for the communications infrastructure that supports them.

Network connectivity
As managed network access becomes critical for governments to deliver applications and services to their populations, connectivity is even more important for military missions, peace-keeping, and civilian applications. Governments recognise the value of a resilient communications infrastructure that operates regardless of the location or situation. As terrestrial communications are not immune to disruption from natural disasters or conflict, commercial satellite communications (COMSATCOM) also provide the vital link where existing military satellite communications (MILSATCOM) capabilities are overstretched or lack coverage.

Personnel welfare
Military personnel serving overseas, like their civilian counterparts, have become accustomed to constant connectivity. Their desire to connect with loved ones back home or enjoy the same leisure activities does not disappear once they are posted to a remote location. This requires connectivity that can deliver regardless of location, and COMSATCOM is an ideal solution. As the welfare factor becomes more important, the COMSATCOM service to government entities is expected to increase.

Customised services
Governments are identifying new and efficient uses of satellite solutions, causing an increase in demand from this sector. Commercially hosted payloads are a good example of this. The flexibility and cost-efficiency offered by hosted payloads ensures that a government can contract many relevant services that a satellite is required for on a shorter timeline than building their own. Hosted payloads are well suited for Earth observation programmes, hosting of sensors, proof of technology missions,



Terran Orbital engineer constructs a satellite platform. Photo courtesy Tyvak

UltiSat's Denmark teleport

or even dedicated frequencies and/or reflectors. A hosted payload can also be attractive for governments that do not yet have a spacecraft in orbit and want to take their place in the international space community.

A turning point in government budgets

Euroconsult's May 2016 *'Government Space Programs: Benchmarks, Profiles & Forecasts to 2026'* report states that global space budgets fell by two percent year-on-year to US$62.2 billion in 2016. Governments launched 75 satellites in 2016, down from the historical peak in 2015, but in line with the last five-year average.

"The good news is that 2017 should mark a turning point with budgets recovering growth after five years of erosion," said Steve Bochinger, COO at Euroconsult and Editor of the report. "The last few years were marked by opposing trends between countries boosting their spending and those forced to apply cost-cutting measures. Most countries, especially the leading ones, should converge into a new investment cycle that should drive up investments in space programs globally for the coming years."

The report expects global spending in government space programs to grow at an estimated US$79 billion annually by 2026. The number of countries investing in space is steadily increasing, with 70 countries in 2016, up from 47 ten years ago. In the coming years, more than 80 countries are planning to invest in space technologies and capabilities, showing that governments consider space a valuable investment to support their national socio-economic, strategic and technological development.

The US remains by far the world's largest spender in space programs, with an estimated US$35.9 billion spent in 2016, and the country has started to reverse the 25 percent budget slide initiated in 2010. Meanwhile, China overtook Russia in 2016 with the world's second-largest space program, growing at an 11 percent CAGR in local currency to RMB32.6 billion (around US$4.9 billion). This followed a 20 percent fall in local currency of RMB213 billion (around US$3.2billion) in Russian space investment in 2016 due to budget cuts. Japan, France, Germany, India and the EU all invest more than US$1 billion in their space programs.

Today, manned spaceflight programs are the largest total expenditure, with US$11.4 billion invested. Earth observation missions is the second-largest spending area, with 58 countries having invested some US$10.9 billion. Launch technology comes third in total spending, with US$6 billion invested.

With a great wealth of new opportunities expected in the next few years, space sector companies have planned and launched many new offerings tailored specifically for the government and military segments. Others have taken the route of adding new expertise in government services through collaborations, joint ventures and acquisitions.

Speedcast enhances government activities with UltiSat acquisition deal

Global communications provider Speedcast International has been making a lot of moves lately to expand its reach with new application segments, notably so with the acquisition of Harris CapRock. July 2017 saw it announce its latest move, when it entered into a definitive agreement to acquire UltiSat for a purchase consideration of up to US$100 million, payable over two years and subject to the ongoing performance of the company.

UltiSat is a prominent provider of remote communications and professional services to governments, particularly the US Government, as well as international government organisations (IGOs) and non-governmental organisations (NGOs). The acquisition will significantly strengthen Speedcast's position in the government and NGO sectors, and complements its existing government activities in Australia Europe and Latin America.

"The acquisition of UltiSat extends Speedcast's position serving government and NGO customers, at a time when we expect government spending to rise. UltiSat has built a really strong reputation providing remote communications and professional services to key customers, such as the US Government and IGOs," said Speedcast's CEO, Pierre-Jean Beylier. "I am excited to have the UltiSat team joining Speedcast. Speedcast's scale, global network and unique support services capabilities will enable the combined group to provide expanded services and coverage for UltiSat's customers around the world. Speedcast will also be able to leverage UltiSat's solutions and expertise to serve other governments globally with which Speedcast has existing relationships."

UltiSat's CEO Mohammed G. Abutaleb will lead the newly-formed government division at Speedcast, which will focus on

providing communication solutions and professional services to Speedcast's and UltiSat's existing and new government and IGO customers, as well as driving new growth in the nearly US$5 billion market for government and military satellite communications.

"The UltiSat team is thrilled to join the Speedcast Group. Speedcast's scale and global capabilities will enable us to expand the portfolio of services we can offer to our customers and to pursue new opportunities. This is an exciting development for our employees and our customers, and I look forward to taking our combined government and IGO business to new heights over the years to come," said Abutaleb.

The transaction is expected to complete in the fourth quarter of 2017 subject to customary closing conditions, including regulatory approvals.

Airbus expands Skynet capabilities with new channel partners in Asia

Airbus owns and operates the Skynet X-band satellite constellation of seven satellites and the ground network to provide all beyond line of sight (BLOS) communications to the UK Ministry of Defence (MoD). The contract also allows other NATO and allied governments such as members of the five-eyes community (the UK, the USA, Australia, New Zealand and Canada) to use the Skynet system to augment their existing services.

In line with increasing market expectations and growing space programme budgets, Airbus has continued to expand its own government services capabilities. In May 2017, Airbus added Planet Communications Asia Public Co., Ltd. (PlanetComm) to its channel partner programme for Skynet 5 military satellite communication services, and expanded its existing partnership with Speedcast. Under the channel partner agreement, PlanetComm and Speedcast will offer Skynet X-band and UHF services and part of the satellite communications portfolios.

Speedcast has been delivering tactical secure communications services to the Australian and New Zealand Governments since September 2016, and the partnership has now been extended to cover customers in the Philippines. In addition, on behalf of Airbus, Speedcast manages the Asia anchor station facility for the Skynet 5A military satellite, based at Speedcast's teleport in Adelaide, Australia. Meanwhile, the newly-signed partnership with PlanetComm covers Thailand, and expands their product offering into the military market.

"It is a really positive step to further increase our relationship with Speedcast, and also PlanetComm within countries that can really benefit from the unique capabilities of the Skynet fleet," said Richard Franklin, Head of Secure Communications at Airbus Defence and Space.

Airbus continues to develop new partnerships to deliver highly resilient Skynet military satellite communication services to the Asia-Pacific region following the move of its Skynet 5A satellite from 6 degrees East to 95 degrees East to provide global X-band and UHF coverage in this region. The relocation of Skynet 5A was initiated in September 2015 to extend the X-band coverage and services from 178 West to 163 East, including the Indian Ocean and Western Pacific region. The Skynet network now offers global military coverage, expanding core service reach for the UK military and augmenting coalition capabilities in the region. Since the relocation of Skynet 5A, Airbus Defence and Space has signed ten channel partner agreements with companies in the Asia-Pacific region and in the USA.

"PlanetComm is truly honoured to become an authorised Airbus Channel Partner," said Trevor Thompson, President and Chief Technology Officer at PlanetComm. "Since the relocation of Skynet 5 to 95 degrees East, which is ideally suited for Thailand and Southeast Asia in achieving high Earth station look angles, we have been actively promoting Skynet-5's X-band and UHF satcom services to the Thai Defence Forces and Government agencies. We are pleased that we have now formalized our business relationship and can continue to actively promote Airbus Skynet services in Thailand."

Lockheed Martin

Lockheed Martin, too, is trying to get a bigger share of the government market with its recent June 2017 investment in nanosatellite producer Terran Orbital. According to Lockheed Martin, the investment will create opportunities for the companies to share their expertise and customer relationships to advance this emerging technology.

"Terran brings established customer relationships across a broad range of civil, military, commercial and classified customers," said Chris Moran, Executive Director and General Manager of Lockheed Martin Ventures. "The opportunity to invest in a nanosat leader allows us to address our customer's increasing interest in rapid, responsive and cost-effective technology missions and demonstrations."

The agreement includes cash and in-kind investments for an equity stake in Terran. Lockheed Martin has partnered with Terran in the past on Department of Defense (DoD) and NASA missions. This investment will enable the expansion of that relationship.

"An equity investment by Lockheed Martin allows us to grow our business while further solidifying our relationship with the leader in aerospace and defense to provide a broader range of innovative solutions to our customers," said Tony Previte, CEO of Terran Orbital.

While Lockheed Martin has provided funding to venture stage companies since 2007, it refocused in 2016 to longer term, strategic investments in technology innovations that could drive growth in existing, adjacent and new markets for Lockheed Martin. With the government services sector set to grow significantly in the coming years, and increased competition in Lockheed Martin's other business areas, the investment could be a boon for long-term results. **GMC**

Artist's rendering of Skynet satellites

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